

"One identified, scanning."

"Second and third targets identified."

"Middle tank, fire, right tank."

A "clunk!" is heard over the intercom as the gunner changes to ten-power on his thermal sights.

"On the way!"

Through the blast from the cannon, the gunner sees a white hot flash.

"Target!"

"Up!"

"On the way!"

Again, the gunner sees what could be flash, but isn't certain, so he announces:

"Lost!"

"Re-engage!"

"On the way!"

This time the flash is obvious, followed almost immediately by apparent

secondary explosions.

"Cease fire, cease fire, freeze! All firing vehicles confirm! I say again, this is Range Safety, cease fire, freeze! Place all gun switches to safe and remove your hands from all power controls. Display a green light when complete. Shut down main engine and all members exit to the back deck. Confirm instructions!"

This dramatized action took place several years ago at Grafenwoehr, Germany when an M1 Abrams main battle tank engaged two M3 Bradley scout fighting vehicles in an adjoining lane during a night gunnery CALFEX (Cavalry Firing Exercise).

With the current emphasis on fratricide occurring as a result of Desert Storm, we need to closely examine what led to this action. I'd like to try to step inside the minds of the tank crew members and analyze the events that led to that tragic night.

First, understand that the methods of engagement are highly refined and each crew member has responsibilities which must be met prior to pulling the trigger. Second, if those responsibilities are met, chance of an accidental fratricide is virtually removed, at least to a range of about 1,500 meters. So, how did a highly trained and professional crew make this mistake?

I say the fault lies with the crew's training. Some may say we've been training tankers the same way for 40 years, so how can anyone make a statement like that?

I say we haven't been training crews the same way we do now, nor on systems with the lethality of today's systems. Now that I've stuck my neck out, let me try to justify my statements.

Let's look at our training devices for clues. The UCOFT (unit conduct of fire trainer) is a computerized marvel that must bear both blame and honor in this accident. The UCOFT is the first training aid to be widely used which presents friendly vehicles in a live fire, war-fighting scenario. That means for a crew to be successful, they must not only shoot the bad guys, but not shoot the good guys. So where's the problem?

The problem lies in the hardware of the trainer. When you change the thermal sight of the M1 series tank from three-power (scanning) to ten-power (engagement), you have to adjust the focus for a clear picture. In the UCOFT, the focus doesn't need adjustment. That means target engagement in the UCOFT leaves out a necessary step in the engagement process. The gunner is taught to flip and fire without adjusting his focus! The desperate need to save time during the engagement overrides proper technique.

Another problem lies directly with training exercises on the range itself. It goes by the name of "Opening Time." This means the time it takes from full target presentation until the first round is fired. This is a step used during scoring procedure under some circumstances. I've known units that trained to fire that first round even when they were

uncertain of what they
were shooting at, and
even when they knew
they wouldn't hit the
target or had the
wrong ammunition
loaded. Incredibly, the
cost and error was
acceptable because of
the higher score possible.

Since no friendly targets were in the target area, no risk was present. That meant a crew could fire at a "hot spot" in the thermal sight picture with absolute certainty that it was an enemy target.

A major flaw in training lies with vehicle identification. In order to be truly proficient in identifying armored vehicles, you must use actual photographs of the vehicles, both in normal light and in thermal imagery, and out to the limits of engagement range.

Crews have to qualify at vehicle identification prior to live fire exercises. However, time crunches sometimes result in taking short cuts, usually with GTA cards with line drawings on them. They are plentiful, convenient to carry and use, and deadly! The poor training and complacency they cause borders on criminal negligence. At least they should have actual size photos rather than line drawings. And why not have hazy thermal images?

I've administered many TCGSTs (tank crew gunnery skills test), and vehicle identification is by far the most commonly failed task, when real images are used. That means we either train tougher, or accept the training weakness. Unfortunately, the senior leadership has the least time to prepare individually and are put in the position of being personally embarrassed, or allowing easier standards.

This is a tough call, and one that will have to be looked at throughout the Armor community. Major changes in priority would have to be made to correct this flaw.

Many training areas fail to insert friendly silhouettes into the target scenarios. I saw this done in the late 70s. The usual result was that the friendly got shot. Rather than correct the problem, the friendly targets were removed. The answer to this problem is obvious, but with far-reaching consequences. A commander would have to have tremendous tolerance and confidence in his subordinates to face the embarrassment of having his superior view a "fratricide" during training. I know of no other way to train to correct the problem.

Is there any good news? Yes, the very structure of the Combat Training Centers is geared toward preventing fratricides. With the MILES (multiple-integrated laser engagement system) equipment, units learn first-hand how not to kill their partners.

Absolute realism demands absolute honesty in training. By keeping the CTC rotations a training exercise rather than an evaluation, a commander can train without fear of retribution. To get full value from the training, he must treat each death on the battlefield as if it were real.

The best commanders I've seen do exactly that. In some instances, junior leaders had to write letters to the parents of "killed" subordinates explaining the circumstances of "friendly fire." Once, a CG ordered a 15-6 investigation performed when an OH-58D was "shot" down during training by a "friendly" M1 tank.

The individual didn't have to pay for the aircraft or account for the lives of the two flight crew members, but the impact was immediate and obvious. Within hours, every soldier heard of the action, and suddenly it was no longer "cool" to shoot down anything that flew.

Currently, many extraordinary measures are being taken to prevent fratricides, and I agree with every one, including hardware systems that provide positive identification, similar to that used in SIMNET (simulation network). This training device allows an armored vehicle crew to lay on another vehicle, press a button and the vehicle is identified by bumper number in the sight picture.

A real-world application of this type would have limitations, and eventually be defeated by ECW (electronic counter-warfare) methods. But, it's far better than what we have now. Visual signals, such as the infrared lamps the former USSR vehicles had on the back of their turrets since the World War II are also viable deterrents to fratricide. Improvements to vehicle location finding through satellite location will also help by accurately locating units on the battlefield.

The bottom line for today, however, is that the most effective fratricide prevention measure is exacting training techniques with no margin for error. Allowance for mistakes during training must happen, but only when training failure is corrected.

Even at the CTCs, this means extra time must be planned to retrain failures. Lack of training resources will always be a problem, but failure to train to standard can only lead to tragedies like those at Grafenwoehr and Desert Storm. The fact that so few fratricides have taken place in recent years is testimony to the fine commanders and great soldiers that are already training to standard.

As my old CSM, Ned Devereaux, used to say to soldiers he caught doing something unsafe, "You can't make me send you home in a coffin! Now do it right!"

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The UCOFT system helps gunners acquire and identify (friend or foe) targets prior to firing.